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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,556	02/17/2000	James A. Moorer	SONC.003US0	6818

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EXAMINER

PATEL, GAUTAM

ART UNIT

PAPER NUMBER

2655

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/505,556

Applicant(s)

Moorer

Examiner

Gautam R. Patel

Art Unit

2655



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 12, 2003
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-106 is/are pending in the application.
- 4a) Of the above, claim(s) 1-3, 15-32, 52-70, 83-88, and 95-106 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-14, 33-51, 71-82, and 89-94 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

DETAILED ACTION

1. Claims 4-14,33-51, 71-82 and 89-94 are pending for the examination.

Election/Restriction

2. Claims 1-3, 15-32, 52-70, 83-88 and 95-106 are withdrawn from further consideration by the examiner, 37 C.F.R. § 1.142(b) as being drawn to a nonelected species [spies other than C], there being no allowable generic or linking claim. Election was made without traverse in Paper No. 8, dated 3-12-03. The Applicant is urged to cancel all non-elected claims.

NOTES & REMARKS

The lengthy specification has not ben checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which Applicant may become aware in the specification.

Specification

3. The disclosure is objected for following reasons.
The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art.
Correction is required.

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 7-8 and 71, 74-76 and 81 are rejected under 35 U.S.C. § 102(e) as being anticipated by Aoki et al., US. patent 6,243,220 (hereafter Aoki).

As to claim 7, Aoki discloses the invention as claimed [see Figs. 1-9] including deriving from audio signal data, a plurality of signals, control information storing signal on first medium storing reminder on second medium and storing control information comprising:

deriving from the audio signal data, comprising:

a plurality of digital signals [fig.6, signals marked 1-5 and 6a], wherein a first of said plurality of digital signals is a first two track audio signal [col. 8, line 65 to col. 9, line 30 and fig. 6A-6B]; and

control information [signals b1 to b6], wherein a reproduction of said audio information can be produced from said plurality of digital signals by use of said control information [col. 5, lines 11-63 and col. 8, , line 65 to col. 9, line 30 and fig. 3B and 3C];

storing said first digital signal on a first medium [fig. 2, Area A] [col. 6, lines 3-64 and col. 8, line 65 to col. 9, line 30 and fig. 3B and 3C];

storing the remainder of said plurality of digital signals on one or more second media [fig. 2, area B] [col. 5, lines 11-63 and col. 8, , line 65 to col. 9, line 30 and fig. 3B and 3C]; and

storing the control information [col. 5, lines 11-63 and col. 8, line 65 to col. 9, line 30 and fig. 3B and 3C].

NOTE: Fig. 2, AREA A stores audio signals, while area B stores audio and control signals. Fig. 6 shows process of combining these signals to produce a unified signal with help of this control information. Also col. 3, lines 34-54.

5. As to claim 8, Aoki discloses:
said first medium is a rewritable memory [VTR] [col. 4, lines 15-16].
6. As to claim 71, Aoki discloses:
deriving from said N-channel audio signal [4 channel] a two channel representation [col. 4, lines 18-61];
recording said two channel representation on a first medium [fig. 2 AREA A] [col. 5, lines 5 to col. 6, line 6] ;
forming additional information, comprising:
a residual dependent upon the difference between said N channel audio signal and said two channel representation [col. 5, lines 5 to col. 6, line 6]; and
control information, including data that can be used to recombine said residual with said two channel representation to reconstruct an M channel representation of said N-channel audio signal, wherein M is greater than two but not greater than N [col. 5, lines 5 to col. 6, line 6];
recording said residual on one or more second media [fig. 2, AREA B] [col. 5, lines 5 to col. 6, line 6]; and
recording said control information [col. 5, lines 5 to col. 6, line 6].

NOTE: Fig. 2, AREA A stores audio signals, while area B stores audio and control signals. Fig. 6 shows process of combining these signals to produce a unified signal with help of this control information. Also col. 3, lines 34-54.

7. As to claim 74, Aoki discloses:
wherein M equals N [col. 5, line 49 to col. 6, line 17 and Table 1 at col. 1-2].

NOTE: When only two channels are selected $M=N$ [col. 4, lines 34-43].

8. As to claim 75, Aoki discloses:
said residual contains (N-2) independent channels [col. 5, line 49 to col. 6, line 17 and Table 1 at col. 1-2].

NOTE: When 4 channels are selected residual is N-2 [col. 4, lines 34-43].

9. As to claim 76, Aoki discloses:
said residual contains less than (N-2) independent channels [col. 5, line 49 to col. 6, line 17 and Table 1 at col. 1-2].

NOTE: When monaural and two channel are selected N-2 is less than N-2 [col. 4, lines 34-43].

10. As to claim 81, Aoki discloses:
recording of said first medium is a rewritable memory [col. 4, lines 15-34].

11. Claims 33-34 and 48-51 are rejected under 35 U.S.C. § 102(e) as being anticipated by Fielder et al., US. patent 6,446,037 (hereafter Fielder).

As to claim 33, Fielder discloses the invention as claimed [see Figs. 1-6D, especially 3-5] including providing master recording [first resolution], deriving lower resolution, forming a residual recording residual, and control information for recombining these signals comprising:

providing a master recording;
deriving from said master recording a reduced digital reproduction of lower resolution than said master recording;
recording said reduced digital reproduction [col. 11, line 41 to col. 12, line 26];
forming additional information, comprising:
a residual dependent upon the difference between said master recording and said reduced digital reproduction [col. 11, line 41 to col. 12, line 26]; and

control information, including data that can be used to recombine said residual with said reduced digital reproduction to reproduce said master recording;
recording said residual; and
recording said control information [col. 18, lines 26-39 and col 19, line 51 to col. 20, line 13].

12. As to claim 34, Fielder discloses:

the recording of said reduced digital reproduction is performed onto the audio portion of a compact disk (CD) playable on a standard CD player [col. 1, lines 12-22 and col. 19, line 51 to col. 20, line 13].

13. As to claim 48, Fielder discloses:

compressing said residual prior to its recording [col. 9, line 52 to col. 10, line 14].

14. As to claim 49, Fielder discloses:

control information further includes data on how the compressing is performed [col. 9, line 52 to col. 10, line 14].

15. As to claim 50, Fielder discloses:

the recording of said reduced digital reproduction is performed onto a rewritable memory [col. 9, line 52 to col. 10, line 14].

16. As to claim 51, Fielder discloses:

compressing said reduced digital reproduction prior to its recording [col. 1, lines 12-22].

17. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 4-6, and 9-14, 72-73, 77-78, 82 and 89-94 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoki as applied claims 7-8 above and in view of Lowe et al., US. patent 5,695,401.

As to claim 9, Aoki discloses all of the above steps, including a plurality of digital signals, control information and storing reminder of digital signals on one or more second medium. Aoki does not specifically disclose type of the medium can be other than VTR, such as CD, DVD or magnetic media and that information stored on these media can be compressed to save space, which is at premium.

However, it is well known in the art that most recording media are interchangeable depending upon requirement of the system also CD [ROM and RAM] are well known for storing audio information and compression of any digital information can be stored on these media. Also, Lowe clearly discloses that it well known in the art to use CD-ROM, CD-RAM, hard drive of any suitable storage medium; and regardless of the storage format [and hence medium] used, the audio storage requirement are same as long as they have large capacity and random access capability [col. 5, lines 19-35 and col. 6, lines 1-9]. Lowe also discloses:

compressing said first digital signal prior to storing on said first medium [col. 5, lines 36-55].

Both Aoki and Lowe are interested in improving the storage mechanism for audio information in most efficient way.

Therefore, one of ordinary skill in the art at the time of invention would have realized that the storage system of Aoki is not limited to any one particular type of storage only. It would have been obvious to have used a CD-ROM or CD-RAM media for storage of audio information in the system of Aoki as taught by Lowe because one would be motivated to store audio information on all kind available storage media for easy transportation and also for comparability of different kind of systems which are available on the market.

19. As to claim 10, Lowe discloses:

said first medium is the audio portion of a compact disk (CD), wherein said first digital signal can be reproduced on a conventional CD player [col. 5, lines 36-55].

NOTE: If they can be stored on CD; inherently they can be reproduced from CD.

20. As to claim 11, Lowe discloses:

said one or more second media is the CD-ROM portion of said CD [col. 5, lines 36-55].

21. As to claim 12, Lowe discloses:

said control information is stored in the CD-ROM portion of said CD [col. 7, lines 1-32].

22. As to claim 13, Aoki discloses:

said audio signal audio comprises more than two channels [col. 4, lines 35-43].

23. As to claim 14, Aoki discloses:

said reproduction of said audio signal comprises a second two track audio signal of higher resolution than a reproduction based on said first two track audio signal alone [col. 4, lines 35-43].

NOTE: When more tracks are added inherently resolution becomes higher. See also fig. 6A.

24. As to claim 4, it is rejected for the same reason as claim 7 above. As to the added limitation storing audio data on CD; Aoki does not specifically disclose type of the medium can be other than VTR, such as CD, DVD or magnetic media and that information stored on these media can be compressed to save space, which is at premium.

However, it is well known in the art that most recording media are interchangeable depending upon requirement of the system also CD [ROM and RAM] are well known for storing audio information and compression of any digital information can be stored on these media. Also, Lowe clearly discloses that it well known in the art to use CD-ROM, CD-RAM, hard drive of any suitable storage medium; and regardless of the storage format [and hence medium] used, the audio storage requirement are same as long as they have large capacity and random access capability [col. 5, lines 19-35 and col. 6, lines 1-9]. Both Aoki and Lowe are interested in improving the storage mechanism for audio information in most efficient way.

Therefore, one of ordinary skill in the art at the time of invention would have realized that the storage system of Aoki is not limited to any one particular type of storage only. It would have been obvious to have used a CD-ROM or CD-RAM media for storage of audio information in the system of Aoki as taught by Lowe because one would be motivated to store audio information on all kind available storage media for easy transportation and also for comparability of different kind of systems which are available on the market.

25. As to claims 5-6, they are claims corresponding to claims 14 and 13 respectively and they are therefore rejected for the same reasons set forth in the rejection of claims 14 and 13 respectively, supra.

26. As to claims 72-73, they are claims corresponding to claims 10-11 respectively and they are therefore rejected for the same reasons set forth in the rejection of claims 10-11 respectively, supra.
27. As to claim 77 it is a claim corresponding to claim 9 and it s therefore rejected for the same reasons set forth in the rejection of claim 9, supra.
28. As to claim 78, Lowe discloses:
control information contains data on how said residual is compressed [col. 5, lines 36-55].
29. As to claim 82, Lowe discloses:
compressing said two channel representation prior to its recording [col. 5, lines 36-55].
30. As to claim 89, it is rejected for the same reason as claim 4, above. As to the added limitation of M channel representation of said N-channel audio data, wherein M is greater than two but not greater than N; Aoki discloses these aspects [see col. 4, lines 35-43].
31. As to claim 90, Lowe discloses:
said additional audio information is compressed [col. 5, lines 36-55]..
32. As to claim 91, Lowe discloses:
control information contains data on how said additional audio information is compressed [col. 5, lines 36-55].

NOTE: Control information inherently has to discloses how data is compressed for the system to work.

33. As to claim 92, Aoki discloses:

wherein M is equal to N [col. 5, line 49 to col. 6, line 17 and Table 1 at col. 1-2].

NOTE: When only two channels are selected $M=N$ [col. 4, lines 34-43].

34. As to claim 93, Aoki discloses:

said additional audio information contains (N-2) independent channels [col. 5, line 49 to col. 6, line 17 and Table 1 at col. 1-2].

NOTE: When 4 channels are selected residual is N-2 [col. 4, lines 34-43].

35. As to claim 94, Aoki discloses:

said additional audio information contains less than (N-2) independent channels [col. 5, line 49 to col. 6, line 17 and Table 1 at col. 1-2].

NOTE: When monaural and two channels are selected N-2 is less than N-2 [col. 4, lines 34-43].

36. Claims 35-40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fielder as applied claims 33-34 and 48-51 above and in view of Kakubo et al., US. patent 5,365,468.

As to claim 35, Fielder discloses all of the above steps, including providing master recording, reduced resolution recording, a residual and control information in CD player environment. Fielder does not specifically disclose that the residual and the recording the control information are performed onto the CD-ROM portion of the CD to the extent claimed. The limitations in claim 35 does not define a patentable distinct invention over that in Fielder since both the invention as a whole and Fielder are directed to storing different sound levels and corresponding control information in most efficient way. The storage space used to store this information and control signals provide no new or unexpected results, so long as the audio data and storage signals are properly stored. If one has fixed control information and does not want that information to be overwritten it stored in a ROM area. If one has flexible control

information it is stored in a Ram area. Therefore, to have residual and control information recorded in a ROM area of CD would have been routine experimentation and optimization in the absence of criticality.

37. As to claim 36, Fielder discloses all of the above steps, including providing master recording, reduced resolution recording, a residual and control information in CD player environment. Fielder does not specifically disclose well known details of sampling frequency conversion and/or manipulate bits per sample. However Kakubo discloses that these are well known. One of ordinary skill in the art knows that these are well known parameters of recording and having them or not having them does not change recording and reproducing audio characteristics that are recorded on CD or any storage medium. Also Kakubo discloses that

a digital recording characterized by an original sampling frequency, and wherein the deriving of said reduced digital reproduction comprises down sampling said master recording to a lower sampling frequency [col. 1, lines 4-25].

Both Fielder and Kakubo are interested in improving the storage mechanism for audio information on CD in most efficient way.

Therefore, one of ordinary skill in the art at the time of invention would have realized that the where a master recording data which has been recorded in a studio with a higher frequency [such as 48 kHz] is dubbed for recording on a Compact Disc [CD], the sampling frequency must be converted to a lower frequency [such as 44.1 kHz]. It would have been obvious to have used sampling conversion scheme in the system of Fielder as taught by Kakubo because one would be motivated to store audio information on a CD lowering frequency is necessary for proper storage operation.

38. As to claim 37, Kakubo discloses:

up-sampling [oversampling] said reduced digital reproduction to said original sampling frequency prior to forming said residual [col. 5, lines 33-53].

39. As to claim 38, Kakubo discloses:

said master recording is a digital recording characterized by an original number of bits per sample, and wherein the deriving of said reduced digital reproduction comprises truncating said master recording to a lesser number of bits per sample [col. 8, lines 52-68].

40. As to claim 39, Kakubo discloses:

said master recording is characterized by an original sampling frequency and by an original number of bits per sample, and wherein the deriving of said reduced digital reproduction comprises down-sampling said master recording to a lower sampling frequency and truncating the resultant signal to a lesser number of bits per sample [col. 1. Lines 14-25 and col. 8, lines 52-68].

41. As to claim 40, Kakubo discloses:

up-sampling said reduced digital reproduction to said original sampling frequency prior to forming said residual [col. 5, lines 33-53].

42. Claims 41-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over combination of Fielder and Kakubo as applied to claims 33-40 and 48-51 above, and further in view of Oomen et al., US. patent 5,649,054 (hereafter Oomen).

As to claim 41, combination of Fielder and Kakubo discloses all of the above steps. Combination of Fielder and Kakubo Son does not specifically discloses details of coding digital sound by subtracting and/or adding dither.

However, it is well known in the art that most sound system always add or subtract some kind of dither for better quality of sound and reduction of noise. Also adding or subtracting dither does not change method of recording or storing audio on a CD.

Oomen clearly discloses that it well known in the art to use dither for optimizing the residual perceptive quality of the audio data [col. 1, lines 31-35]. Oomen also discloses:

adding dither to said reduced digital reproduction subsequent to down-sampling said master recording but prior to recording reduced digital reproduction [col. 4, lines 11-59].

Both combination of Fielder and Kakubo and Oomen are interested in improving quality of sound channel and improving storage capacity of the CD.

Therefore, one of ordinary skill in the art at the time of invention would have been motivated to improve storage capacity of CD and improve quality of the sound in the system. It would have been obvious to have used a method for adding and subtracting dither to audio in the system of Fielder and Kakubo as taught by Oomen because one would be motivated to reduce noise in the system of Fielder and Kakubo Son and also increase storage capacity thus improve quality of the sound.

43. As to claim 42, Oomen discloses:

subtracting said dither prior to up-sampling said reduced digital reproduction [col. 4, lines 11-59]..

44. As to claim 43, Oomen discloses:

adding dither to said reduced digital reproduction prior to truncating said master recording. [col. 4, lines 11-59].

45. As to claim 44, Oomen discloses:

said dither is reversible, further comprising: subtracting said dither prior to forming said residual. [col. 4, lines 11-59].

46. As to claim 45, Oomen discloses:

adding dither to said reduced digital reproduction prior to truncating said resultant signal. [col. 4, lines 11-59].

47. As to claim 46, Oomen discloses:

dither is reversible, further comprising: subtracting said dither prior to up-sampling said reduced digital reproduction. [col. 4, lines 11-59].

48. As to claim 47, Oomen discloses:

said control information further includes data which characterize how said dither can be reversed. [col. 4, lines 29-50].

49. Claims 79-80 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoki as applied to claim 71 above, and further in view of Moorer, US. patent 6,072878 (hereafter Moorer).

As to claim 79, Aoki discloses all of the above steps. Aoki does not specifically disclose that deriving from the N-channel audio signal a two channel representation is based upon a linear combination of a finite set of spatial harmonics, or combination of zero and first order spatial harmonics which is linearly independent of said two channels representation.

However, it is well known in the art that rather than arranging speakers in some particular pattern before system can reproduce the specified number of spatial harmonics, whatever speaker locations that exist are used as parameters in the electronics encoding. Also use of linear combination of a finite set of spatial harmonic does not change method of recording or storing audio on a CD.

Moorer discloses:

the deriving from said N-channel audio signal a two channel representation is based upon a linear combination of a finite set of spatial harmonics [col. 4, lines 1-23].

Both Aoki and Moorer interested in improving quality of sound channel and providing proper storage of audio with minimum circuits.

Therefore, one of ordinary skill in the art at the time of invention would have been motivated to add necessary program to so as not to move position of the speakers. . It would have been obvious to have used a linear combination of a finite set of spatial harmonics in the system of Aoki taught by Moorer because one would be motivated to add signal in the system of Aoki such that physical movement of speakers becomes unnecessary and two dimensional plurality of speakers become unnecessary to achieve good quality of sound, thus saving space and expense that would have been necessary in absence of this arrangement [col. 1, lines 31-47; Moorer].

50. As to claim 80, Moorer discloses:

said residual comprises a combination of zero and first order spatial harmonics which is linearly independent of said two channel representation [col. 4, lines 1-23].

Other prior art cited

51. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. McPherson et al. (US. patent 6,298,025) "Recording and playback of multi-channel digital audio having different resolutions for different channels".

b. Beksa et al. (US. patent 6,335,694) "Airborne audio flight information system".

c. Mishina (US. patent 5,745,643) "System and method of reproducing playback data".

d. Watanabe (US. patent 6,430,354) "Method of recording/reproducing moving image data and devices using the methods".

e. Komamua (US. patent 5,497,154) "Dither generating apparatus".

Contact information

52. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.



Gautam R. Patel
Patent Examiner
Group Art Unit 2655



March 28, 2003